

GLASGOW  
UNIVERSITY  
1842  
LIBRARY

— Enteric Fever —  
its History Causes  
Symptoms and Treatment  
Being —  
A Treatise written for the  
Inaugural Dissertation  
required Prior to the  
Examination for the  
Degree of  
M D

Glasgow University  
April 1842 — by  
John Percival Hunt  
L.N.C.P.S. & L.R.C.S.Y

}

ProQuest Number:27539135

All rights reserved

INFORMATION TO ALL USERS

The quality of this reproduction is dependent upon the quality of the copy submitted.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if material had to be removed, a note will indicate the deletion.



ProQuest 27539135

Published by ProQuest LLC (2019). Copyright of the Dissertation is held by the Author.

All rights reserved.

This work is protected against unauthorized copying under Title 17, United States Code  
Microform Edition © ProQuest LLC.

ProQuest LLC.  
789 East Eisenhower Parkway  
P.O. Box 1346  
Ann Arbor, MI 48106 – 1346

The subject which I have chosen  
 for this thesis is one fraught with  
 interest not only to the Historians  
 of Medical Literature but also on  
 account of its great development  
 in the present day deserves the  
 attention of the Physician and  
 Pathologist — Gout for a long season  
 enjoyed the reputation of being the  
 Aristocratic disease but in these  
 days of abolition of Port Wine  
 in frequent and large doses  
 administered daily (Port Cibus)  
 as an aid to the digestive process.  
 Gout no longer can be, with its  
 more formidable competitor but must  
 give way to that malady which  
 now has numbered amongst its  
 victims many of the highest of  
 our Aristocracy; the name of  
 the much lamented Prince Consort

2.

heading one of its long lists of  
Mortality and at the present  
time had well nigh commenced  
another page of its immortal record  
with the name of his eldest son  
the heir to the British Throne  
but referring to a higher power  
I am glad to be able to say  
"Sic Fata non Sumunt"

Long and continued investigation  
the product of much and careful  
work by honest enquirers has  
taught us not only what we  
have to combat against in  
our once unknown enemy but  
also how to guide its stricken  
victims through the long and arduous  
struggle —

The selection of a name by which  
to designate that I am about which  
I am writing is a task which

would require more time than I  
at present can afford to give it.  
therefore I must follow in the wake  
of those who have so fully described  
this malady before, and select a  
name from among the numbers  
which have from time to time  
been given.

From an early date the names  
of Abdominal Typhus, Peco Typhus,  
Febris gastrica denoted at least  
a suspicion of the true character  
of the disease to which. - Louis-  
gave the unfortunate name of  
Typhoid Fever.

That the disease certainly different  
in many respects from the true  
Typhus as seen in several epidemics  
and as accurately described by  
careful Physicians could not  
be doubted. Hence a desire

4.  
to point out the seat of the  
disease led many to adopt  
these names and ignorant of  
the true nature in its entirety  
of the fever it was easy to slip  
into the idea that Typhus had  
changed its type in certain places  
at certain times and from unknown  
causes. After this it was  
supposed by some that a new  
disease had made its appearance  
differing only from Typhus in  
its attack on the bowels.

In order to refute this idea I  
may refer to the history of the  
disease given at great length  
by Dr Charles Murchison in his  
work on Continued Fevers from  
which I have extracted the following  
statement—

In the year 1759—Saurage supposed

5.

the disease to be produced by the  
irritation of an intestinal worm  
called the fever "Typhus Hystericus  
Tremens" but at an earlier  
period even than this the disease  
was recognized. Hippocrates and  
Galen both mention a fever  
"Characterised by diarrhoea, offensive  
watery stools, tympanites, abdominal  
pain accompanied by red rashes  
and lengthened delirium".

Of course this is not positive that  
such a disease as we now recognize  
in the present day and which Louis  
called Typhoid Fever was known  
to the Ancients; it might have  
been scarlet fever with persistent  
diarrhoea. But tracing out the  
full history of the case we find  
Speijerius in the 17<sup>th</sup> century  
describing a disease closely resembling

6.

that which we now recognise now  
as a distinct Malady in its  
way connected with Typhus Fever.  
About the year 1700 Willis in  
England called attention to the fact  
that there was a fever present  
differing from the then known  
(Febris pestilens) in an absence of  
its eruption peculiar longer  
duration and taking on a dysenteric  
form.

Baglivi of Rome seems also in  
the 17<sup>th</sup> Century to have been aware  
of a disease which in treatment  
called for such measures as  
Emesection rather than Vomition  
of the abdomen but for which  
the administration of Bark was highly  
injurious.

In 1734 J. E. Filchrist of Durham  
published an essay on Miasmata



7. Fever in which he dwells on its  
"length of duration and Typhoid  
character"

In 1746. Sir R. Manningham  
writing of the same Malady  
adopted the name of "Febricula"  
and strongly condemned Bleeding in  
it.

In 1835 Dr. Pugh observed the  
eruption in the then supposed  
"Contagious Typhus" of Italy and  
pointed out to Dr. A. C. Stewart  
in the Glasgow Infirmary  
Dr. Perry considered that though a  
lesion in the bowel occurred in  
the Contagious Typhus it might also  
exist without the Typhus Fever  
and independently of it.

Here then we find the first  
glimmer of light making its way  
through the dark unweaving curtain

of ignorance, and to forward  
in America belongs the honor of  
first clearly describing in 1837 the  
two eruptions —

A few years later Dr. A. P. Seaman  
in 1840 for the first time in  
England clearly described the two  
eruptions and drew the distinction  
between them as being the products  
of distinct forms of fever.

Later on in 1849 and 1851 the  
great Sir William Jenner further  
elucidating the cause of these  
symptoms which occasioned so  
much discussion and in concluding  
the long list of investigators who  
with them in their Dept. of Pathological  
Research; Why should I omit the names  
of Farr, Anderton and Lyons  
connecting with the name of  
Charles Murchison the patient

g.

collector of the history to which as  
I have before mentioned I am indebted  
for many points in this brief  
resumé.

Returning then to the subject of  
selecting a name for a disease  
which has received so many; each  
differing from each other either in  
strictness of definition or in totally  
different meaning according as  
each investigator believed in certain  
theories of the cause of the disease.  
The Greek typhoid objected to as essentially  
wrong and conveying a wrong  
impression to the mind - is not -  
A typhus like fever -

typhus - stupor - errors - like  
then again the name of "Enteric Fever"  
ΕΥΤΕΡΟΝ - an interesting name  
given to denote the typhoid fever  
which up to this time was regarded

as a species of the genus Typhus  
 this appellation arose from the  
 knowledge of the fact that in this disease  
 a peculiar lesion of the bowel took  
 place in the lower part of the ileum  
 inflammation spreading itself over the  
 mucous membrane of that intestine  
 This view as a satisfactory solution  
 of the def. was accepted by  
 many as it is indeed at the  
 present day —

Dr. Murchison however objected to it  
 as impl. that the intestinal  
 irritation was the cause of the fever  
 in place of the consequence he  
 proposed the term of Pythogenic  
 Fever  $\pi\acute{\iota}\theta\omicron\gamma\epsilon\gamma\gamma\epsilon$  —  $\tau\acute{\iota}\phi\omicron\phi\omicron\upsilon\alpha$  —  
 Putres —  $\gamma\epsilon\rho\rho\alpha\varsigma$  — Born of Putridity  
 insisting that this form of fever  
 was caused and generated by  
 certain forms of "decomposing organic

Matter.

Thus then whether we derive it from  
the disease from its supposed  
origin or from its general  
Complication we must come to  
the conclusion that there is a  
malady possible to be mistaken  
in some forms for Typhus (fever)  
presenting grave symptoms of  
visceral Complication entire in  
its nature and certainly frequently  
if not always the product of an  
Exciting Cause which may be  
some form of organic decomposition.  
Though for long the term of Typhus  
has been used and is greatly so in the  
present day not only by the public  
but by Medical men I should greatly  
prefer the name Enteric as denoting  
the Character of the Disease and  
thus pointing the mind to the

of the Chief complications  
 of this fatal Malady, and  
 for which in its proper place  
 I hope to propose a Remedy which  
 I have used with great Success in  
 preventing the intestinal Complications  
 and which I am unable to discover  
 as having ever been used in such a case  
 before.

I shall now briefly enter into the Examin-  
 ation of the Cause of "Enteric Fever"  
 Dr Marchison the Champion of the Pythogenic  
 theory distinctly contends that the Fever  
 is generated by decomposition and  
 as I have just shown names the disease  
 from that circumstance, and gives  
 many Cases to prove his assertion  
 while others of whom Dr Roberts of New  
 York is one and who has just  
 written in the New York Medical  
 Journal an article in which he

declares "that however the emanations from drains etc may be they can not generate Typhoid fever unless the excretions in the drains be charged with matter originating from Typhoid patients."

Other than is a sweeping assertion directly opposed to Dr. Murchison's views which have their supporters from my own observations and from those of others directly communicated to me. I shall endeavor to prove that whilst Enteric Fever most certainly in many cases has its origin in effluvia derived from drains impregnated with the true emanations from the excreta of a person suffering from Enteric Fever the same symptoms - the same result - and hence we presume the same fever may be produced by some morbid

agent acting on a predisposed  
Constitution and having a perfectly  
different source.

This is not thought an impossible  
thing in Chemistry; (to take an example  
from an inanimate subject) if acting  
on a colourless solution & all at

once by different reagents we form  
with one a yellow precipitate with  
another a deep blue. One we look  
at & wonder; because we know the  
reason why these changes ought to  
take place; but as yet we are  
ignorant of the true reason why  
two different and distinct agents  
should produce the one and the same  
Malady (Enteric Fever); that this  
is so is evident from abundant  
proof of Enteric Fever originating  
in isolated farm houses miles  
away from any dwelling, and



When the inmates had never suffered  
 from the disease, nor come in contact  
 with the infected clothes of any person  
 who had suffered from it; and also  
 in places where the disease had  
 never previously occurred, suddenly  
 showing itself and when on close  
 investigation it was discovered that  
 the drains or a cess pool full of  
 decomposed animal matter were  
 giving off obnoxious gases or the  
 these gases in solution were being  
 conveyed down by percolation through  
 the earth to a well which supplied  
 the inhabitants with water for  
 drinking purposes and thus producing  
 the form of fever described as Enteric  
 Also numerous cases are on record of  
 where it has been found after an  
 outbreak of the fever that the drains  
 or the water supply of the house

16. has been poisoned by the gases generated from another fever which entame the Pericrta derived from a Body actually suffering from an attack of Enteric fever. —  
From this then it is apparent that there is more than one source of Enteric Fever, and indeed I am disposed to think though the causes are numerous which bring about the one effect we can attribute to one great source that of animal or vegetable decomposition the principle cause of the disease when not epidemic. It has been urged that where intermittent fever is constantly present "Enteric Fever" in its true type is never to be met with. This I am disposed to doubt from my own personal observations in cases of intermittent fever in the

17  
West Indies.

For though the exact symptoms in their entirety are not to be met with in those fevers daily seen in Central America, in many cases they so nearly approach to those which characterise the "Entire Fever" of Europe that had we the opportunity of carefully investigating the subject I doubt not in some cases we might find the bowel lesion. I am sorry to say owing to my short stay in each place I was unable to find out if the bowel lesion was ever discovered. The Natives know well the peculiar nature of the Malarious fevers and commence from the outset of the attack to administer stimulents - Ammoniac and enormous doses of Quinine and certainly with

the best possible effects and save  
me the regard Entire fever in this  
Country as a malarious fever and  
adopt measures from the first  
to support the strength of the  
patient. I think we would find  
better results.

It has been stated that Entire  
Fever is always more prevalent  
in autumn this I have no doubt.  
May be the case in epidemics  
as there are present at that  
season of the year far more  
predisposing causes; take for  
example one. the scorching  
sun of an August day causing  
an increased evaporation of the  
watery constituents of the blood  
induces thirst & debility which  
the Londoners so frequently have  
recourse to quinine which is not

19.

always the freshest, and even this  
is often the case among the rich  
who from many causes are unable  
to procure that fresh supply so  
enjoyable in the country gardens.  
This partially decomposed fruit  
then has a great tendency to  
produce the well known form  
of enteritis called "English Cholera"  
and an intestinal mucous membrane  
previously inflamed is indeed a  
rich soil on which the germs of  
Enteric Fever may sow themselves,  
such germs being present from any  
cause, and in time produce  
an attack of true Enteric Fever.  
But this is not the case in the  
country where these predisposing causes do  
not exist. At such an extent  
for severe dysentery and English  
Cholera are not so frequent

in a healthy Country distinct as  
 might be supposed in the autumn  
 when such malades are prevalent.  
 I think I am right in saying that  
 I have not met with on an average  
 more than from 12 to 15 per cent  
 of these diseases in a total of  
 all the cases seen for the  
 three months of autumn extending  
 over a period of six years.

It must not be supposed that  
 I mean to infer that entire fever  
 can only attack persons thus  
 rendered prone to receive its  
 poisonous influence. But I do  
 think this explanation fully accounts  
 for the autumnal epidemics which  
 have led persons to regard the  
 disease as mainly a malady  
 of that season of the year as we  
 regard the summer diarrhoea which

21.

is of rare occurrence, at other times I have met with cases of Enteric fever in the height of summer, winter as frequently as in autumn and do not think the disease likely to occur for the first time in one season more than another.

Here then I shall narrate two cases which came under my especial notice, both of which occurred in winter in the months of December and January respectively.

A f. A healthy domestic servant girl living at 12 Hall the seat of a family for centuries well known in Yorkshire was suddenly seized with shivering and great febrile excitement - rough Pneumonic symptoms rapidly supervening in the third day of the attack. I saw

22.

the patient that night in consultation with the regular medical attendant who thought the case to be one of Syphoid Pneumonia without any connection with enteric fever but simply an attack on the lung resulting from cold.

I carefully examined the patient and came to the conclusion it was a case of true "Enteric Fever" complicated with chest affection. I saw the patient again the following evening and confirmed my diagnosis from the symptoms present the state of the tongue and fauces the eye the increase of temperature the thermometer marking  $104^{\circ}$  in the axilla - the right lung on stethoscopic investigation proved to be largely implicated there was great dullness on percussion absence



of the vesicular murmur bronchial  
 breathing, respiration increased to 30 per  
 minute - there were only two spots  
 visible on the chest which looked  
 like small flea bites but wings &  
 the accompanying symptoms they  
 were regarded as suspicious -  
 there was great tenderness over the  
 right iliac fossa and marked  
 tympanites - I did not see the case  
 again but was informed by the  
 Doctor who attended that consolidation  
 of each lung rapidly set in and  
 the patient succumbed to the disease  
 on the 10<sup>th</sup> day, without any signs  
 of putrefaction complication or marked  
 by diarrhoea the force of the  
 poison expending itself on the lungs  
 the source of this attack was not  
 been checked nor did it spread,  
 but that it was a case of "putrefaction"

"Then" I am certain for a Medical friend who also saw the case pronounced it to be such and the Doctor who attended the case to its termination has since informed me that he had every reason in the end to consider it such —

The second case was as follows  
 J. B. A Farm servant aged 22 years healthy robust had never been ill before, always ignored cold and heat was a hard working man with a clear good memory and superintended the work of all the Farm Lads he lived in the house with his Master and occupied a room within three feet of that where the father and mother with two of the children slept  
 During occasion one evening to go to the village distant one mile

he left the house wearing no further clothing on his body than his white linen jacket he was wont to wear over a cotton shirt both summer and winter in and out of doors, before he returned a heavy fall of snow followed by a cold rain completely wet his light clothes which in their wet state he continued to wear but bed time about one hour.

The following morning he was seized with rigors and marked symptoms of severe influenza. I saw him a few hours after and prescribed a much muted dose of Castor oil enjoying perfect rest as he was very nervous and an abstinence from all solid food prescribing a diaphoretic saline mixture. I left the house not even suspecting the true nature of the disease.

26.

which ended in a severe attack of "Entire  
Fever" recovery not taking place for  
some weeks - but as I shall have  
occasion to refer to this case again  
when considering the treatment of  
the fever I shall not pass on to  
the consideration of the frequency of  
Entire fever -

In the district in which these two cases  
just noted occurred this form of  
fever was not very frequent and  
there were no other cases at the time  
there had not been a single attack  
of Entire fever from the time  
the first occurred to the second a  
period of over twelve months  
and in neither case could the disease  
be traced to any known continuation  
of a specific form, in the case  
of the farm servant there may have  
been an escape of such gases

27.

as are supposed to generate such fevers, as the farm yard was very near the house, and the drains were in a very bad state - in neither case did the disease spread, in the latter I took the precaution to have the stools buried in a field at the back of the house.

Both these cases go to prove, first that the disease may be generated by a source (what ever that source may be) in no way derived from a body suffering from a like attack. In the second place that the disease may assume as severe a form, and occur when not epidemic as much in winter as in summer, and thirdly that the weather ~~does~~ does not influence the disease, of course I am aware that it may be urged two cases in no way can be counted

on a proof of any theory but had  
 space I could quote numbers of others  
 which go to prove the same.

S. Barlow I may mention regards Enteric  
 Fever as more frequent in winter than  
 in summer; and in America it is  
 called "Fall Fever" - on account of  
 its supposed prevalence in the autumn.

However - Before proceeding to consider further  
 the frequency of the disease or contrast  
 it with that fever which it is said  
 to be like; I should like briefly to  
 relate a case which has just come  
 to my recollection and which is  
 a good example of how an epidemic  
 may occur from a source propagating  
 the true Enteric Miasmata morbi and  
 the knowledge of such be completely  
 hid for some time. The case occurred  
 near one of my patients - places and  
 he has bled for the correctness

291.

of the account to me. —  
A clear and limpid stream was  
flowing from a natural well at the  
foot of a hill some distance from  
any human habitation. Was regarded  
for ages as the best water in the district  
indeed tradition held the water to have  
preserved its purity. When all other  
waters had become affected, neither  
the incessant rain of a winter days  
nor the hot sun of summer were  
able able to affect an increase or  
diminution in the contents of the  
fountain of clear cold water, ever  
flowing from the little well it had  
many a time refreshed the heated  
laborer in the noon day, and  
had often been resorted by the rich  
as well as the poor not only to quench  
their thirst. But also to satisfy a  
strong prevailing opinion which entailed

its health-giving powers; a few years ago it was however doomed to convey the insidious poison and spread disease and death among its many admirers.

One summer's evening a young girl returning home across the meadows stopped at the well, tempted as she before by the clear and sparkling water she stooped down and drank. She was in no way heated nor could it be supposed that she had produced the sudden and violent symptoms which set in the following morning by the draught of cold water. The symptoms continued to increase in severity till death seized its victim after a few days illness. Shortly afterwards a labourer was taken suddenly ill with the same train of symptoms those of marked



31.

"Enteric Fever", this man lived at short distance from the place where the first case proved fatal and in his case it could not be satisfactorily attributed to any emanation from the body suffering from the same symptoms; but remembering that he also had drunk from the same well the attention of the authorities was directed to the general stream. Numbers of cases now presented themselves and after careful investigation it was discovered that the well had indeed been poisoned with an emanation derived from a source at a considerable distance.

A house which stood on a higher level in the direction of the well was discovered to have a large cess pool full of decomposed organic matter which had lain for years

and into which the excreta of a patient suffering from "Enteric Fever" had been conveyed some years previously which case had almost gone out of recollection; by percolation through the earth the insidious poison made its way and impregnated the water thus producing the epidemic of "Enteric Fever" The cesspool was emptied and disinfectant the source of the poison being removed that well soon resumed its position which for many years it enjoyed among the inhabitants of that rural district.

This case then is instructive as showing how the poison may lie latent for so long a time and then suddenly reappear in a most unlooked-for manner it would teach us to be most evervigilant in our exertions to discover the source of an epidemic.

the discovery of the source being the removal of the disease in many cases.

D. Richardson states that he produced a similar appearance to that found in the intestine after death from enteric fever; in a dog by inhalation of Sulphide of Ammonium one of the reputed gases of sepsis. Magendie produced a similar effect by injection of putrid substances into the veins; so that it is possible to generate the disease without acting with matter derived from the fever itself, certain it is and I can speak from experience, that in the East Indies, and in Central America especially the Llagos, those constant sources of malarial fever produce an effect which the gases found generated by the decomposing organic matter in the bottom of these pools

## TYPHOID FEVER AND SEWER GAS.

*To the Editor of THE LANCET.*

SIR,—I have been recently requested to report on the origin of two cases of typhoid fever in the family of the principal of a large school. This gentleman had six children, and two of them were attacked with typhoid fever in the early part of January, one fifteen and the other eighteen days after the breaking-up of the school for the holidays. The children occupied a suite of three rooms on the first floor. They are sufficiently large, and the air supply is wholesome. The last of the suite opened upon a corridor and staircase leading to the school bath-room and dormitories. The children were in charge of a nursemaid, and, with a remarkable exception, were treated and fed in the same way. This exception related to a habit acquired only by the affected children of drinking cold water freely, particularly at night; the younger ones have not been encouraged in the habit, but have been chiefly fed on milk, of which the supply was not stinted. The night supply of water was derived, for the sake of convenience, from a tap connected with two large cisterns supplying the baths, and from them the general supply for the boys' dormitories is also drawn. As this water had been used for months, it became necessary to examine the cistern more carefully, and to see what changes took place when the boys went home. The room in which the baths are placed has been divided by a partition reaching to the ceiling, and in the smaller part the cisterns were placed on cross beams high above the head. There was a small space left on one side, in which there is a window near the ceiling, and immediately beneath in the corner was a syphon water-closet. The tops of the cisterns were open, and it became obvious that any escape of sewer gas from the closet would be liable to be absorbed by the water, particularly if the window at the top were closed. During school term the window was usually kept open, and there was a constant demand for water. The closet, though in frequent use, was never observed to smell; indeed, it was continually flushed by the slops of the dormitories. But as soon as the boys broke up, the window and door of the closet were permanently closed, and the demand for water was greatly reduced as soon as the general scrubbing of the floors and corridors consequent on the dismissal of the boys had ceased. This involved an unusual pouring down of water through the closet. The syphon was thereby sucked dry, and the sewer gases, having full play upon the extensive surface of the water, were rapidly absorbed; indeed, when the door of the closet was for the first time opened after the children were struck down, the stench was quite unbearable, although there was no smell outside.

The source of the fever is thus made out, and we have direct proof of the poisoning of a large body of water by an exposure to sewer gases for the space of two or three days, and additional evidence that the period of incubation is from fourteen to sixteen days.

I am, Sir, yours, &c.,

King's-road, Feb. 1872.

J. H. STALLARD, M.B. Lond., &c.

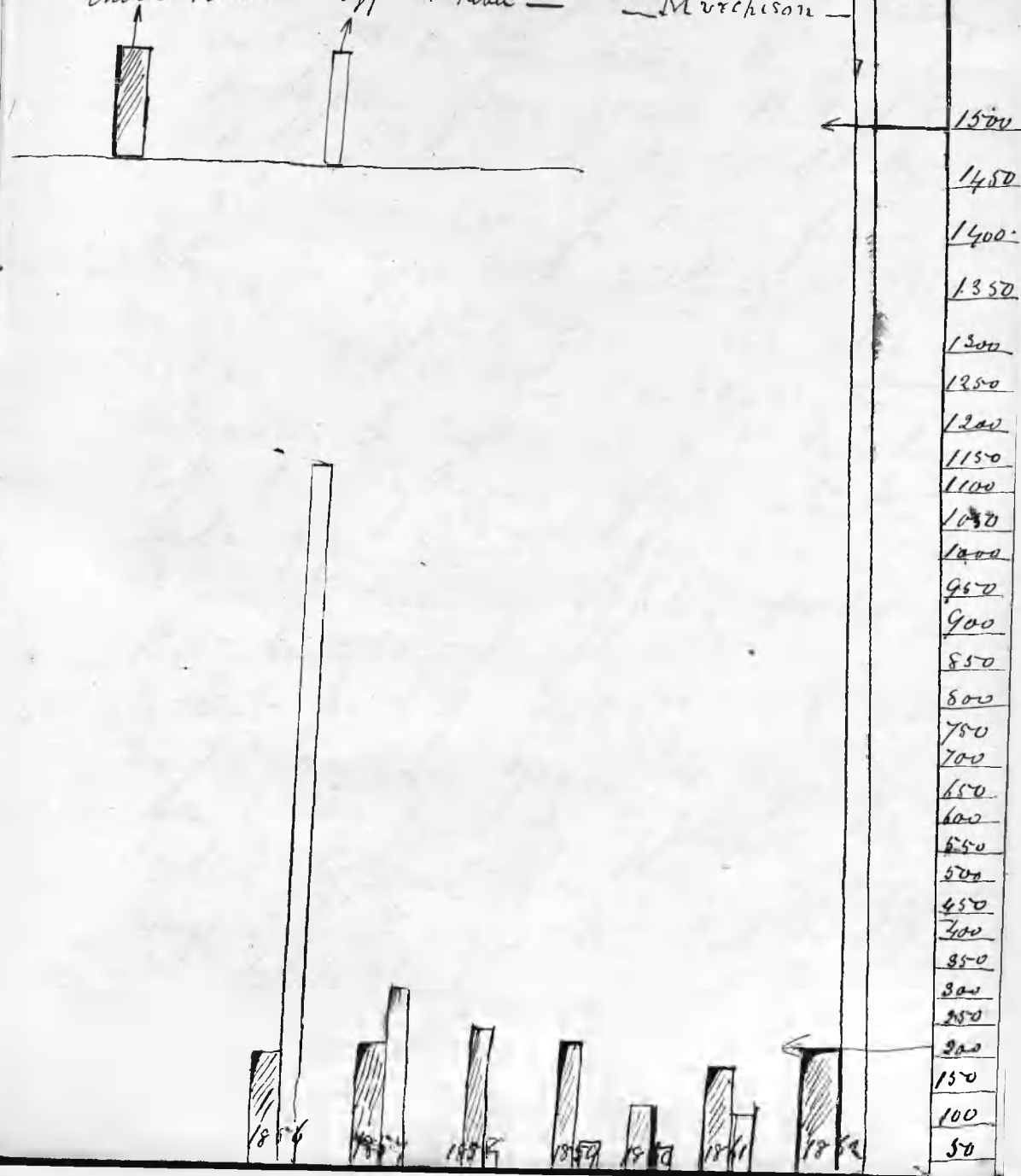
34.

are unable to do when artificially  
obtained

An interesting letter bearing on this  
subject appeared in the Lancet for  
February 17<sup>th</sup> 1872 and seems to prove  
that some cases can make their way  
even into water without any conducting  
agent and cause entire fever.  
There appears the letter referred to  
to be worthy of notice.  
Returning now to the subject I so  
abruptly left off, the consideration of  
the frequency of entire fever  
I have extracted from Dr. Murchison's work  
a tabular report of the cases  
admitted into the London Fever  
Hospital, contrasted with the admissions  
in cases of Typhus fever from  
the year 1856 to the year  
1862 both years inclusive by which  
at a glance the number of cases in each year can be seen

# Number of Admissions into the London ~~Fever~~ Hospital.

35. Enteric Fever — Typhus Fever — Murchison —



But in certain places and countries  
and at certain times the prevalence  
of Typhus fever exceeds that of Enteric  
though I believe on the whole there  
are more cases of Enteric fever  
(taking one year with another), in 1862  
we had a typhus year as also in  
1866-6- but in 58- 59- 60- 61 the  
admissions of Enteric or as Dr. Murchison  
calls it Pythogenic fever into the  
London fever hospital far exceeded the  
number of cases of Typhus treated in  
that institution.

In that part of Yorkshire where I  
resided for some years, on enquiry I  
found the cases of Typhus & the so  
called Typhoid fever were distributed  
very unusually over the district; taking  
the total number of each disease  
during a term of years.

In Ireland however this is not the case

37.

The cases of Typhus are far more numerous than those of enteric fever and it would appear that the ill fed ill clothed peasant of the Eastern isle can live in an atmosphere surrounded by effluvia which we would suppose would be a fertile source of "enteric fever" in its worst type, without ever suffering from that disease. I ascribe this not to the protective influence of typhus, but to the lack of the free admixture of the obnoxious gases with atmospheric air, the cabins being unprovided with drains in which the pent up gas might develop itself.

The period of incubation in most cases of fever varies greatly. We are we indeed to suppose in every case the history will enable us to discern the



38 exact time when the patient  
first came under the influence  
of the poison - the source of the  
disease.

In J. Stollard's report to which I have  
before referred he draws attention  
to the fact that the period of incubation  
(discovered under peculiar circumstances,  
in those cases was from 14 to 16 days.  
I however have adopted as a rule which  
has been held good in all cases alike  
when asked by my patients the probable  
length of duration of the attack, that  
should the case proceed favorably  
24 days might be counted on deciding  
that time into three, there would  
then be 8 days for the period of incubation  
more or less according with increase of fever  
8 days for the fever to gain its height  
and 8 days to recede. While the  
stage of convalescence would vary

39.

in duration according to the intensity  
of the disease & the vigor of the constitution  
Some patients recovering in a few  
weeks others taking many months  
Change of air and scene greatly  
facilitating the curative process.

S. Bead considers the stage of incubation  
to be from 10 to 14 days, but there  
much is great difficulty in arriving at  
this conclusion —

As far then as I have gone in the con-  
sideration of Enteric fever. I think we  
may deduce these facts —

That — there is a fever constantly to be  
met with differing from Typhus in  
many and essential particulars; no  
new disease, no modification &  
extension of an old Malady. But  
we know of the agents in its  
peculiarity of symptoms, and calling  
for different treatment though we have

no proof to lead us to infer that  
 they possessed a knowledge of the true  
 nature of the disease, or the cause of  
 its great mortality; even only a  
 few years back we find Sir J. D.  
 Corry narrating a case which  
 if I remember rightly occurred in the  
 Mater Hospital Dublin of a mild  
 attack of typhus fever in a girl  
 who suddenly when recovery seemed  
 fast advancing died without  
 any apparent cause or warning  
 & in whom if I remember rightly the  
 throat was found greatly inflamed.  
 Further that the agents which produce  
 the disease are direct contamination  
 and decomposed organic matter  
 communicated by the true poison  
 emanating from a diseased person  
 suffering from that form of fever.  
 That all diseases are alike but that

491. in certain cases there may be perhaps  
causes; and that it is no rare disease  
but is occurring frequently and often  
assuming a very grave character owing  
to its complications

Having become acquainted then with such  
facts our first duty should be to  
prevent and stamp out the disease  
and for the method in which we are  
proceed I may refer to the pages of  
the Lancet and to its charges against  
the drainage of Lonsborough Lodge  
Scarborough published in the close of  
last year as also to the works on  
Hygienic Reform lately published, further  
than doing so I must not permit  
myself to go as the subject embraces  
far too wide a field in which to enter  
in this review; it may be interesting  
however to refer to a case which came  
under my notice about 6 years ago

42. And which shows how much we need  
that proper legislation should at once  
interfere and put a stop to  
existing evils of so grave a nature.  
Remember well in a country village  
some 30 miles west of London having  
a population of some 500 persons  
finding an open cess pool full of  
excrementitious material derived both from  
the animal as well as the vegetable  
kingdoms within 12 feet of the  
door of two cottages and within 20  
feet of the high road. It required 3  
months persuasion to compel these  
people to build a covering over the  
cess pool and empty it; even though  
a child walking near the door fell into it  
and was nearly drowned, so great  
an apathy seems to exist among the  
people in certain districts to adopt  
proper means to convey the excrement

from the dwelling to a proper distance.  
 The present system of Parish nuisance  
 removal in general works badly, the  
 licensing officer is the officer of Health  
 and unless reported to him the  
 nuisance may remain for years, and  
 often the reporting of a nuisance  
 causes an ill feeling in the mind  
 of the person who has to pay a fine  
 or take the trouble to remove a  
 nuisance which does not annoy himself  
 and in most cases the nuisance  
 inspector will never care to search it  
 out for himself and generally he  
 is too ignorant of the proper  
 sanitary laws to be able even to  
 suggest a cure, of course what  
 I have just been mentioning applies  
 chiefly to County districts — in  
 some of which, profuse diarrhoea  
 with a high fever of a hectic nature

44. terminating fatally by consumption,  
is (believed) is very common, it  
is quite possible for such a case to  
be true. Entirely new and recognized &  
I feel sure that even to myself  
such cases have occurred, it is an  
easy matter to say what a disease is  
but to know its true nature is  
more difficult. Here it would not be  
out of place to mention the earth closet  
system. Those for some years tested  
it myself and finding it to act so  
admirably I should certainly recommend  
a trial to any one who has an  
opportunity of testing its value.  
The apparatus may be simply a  
"Mixer" earth closet with a pan  
underneath which when full can  
be removed and emptied into a hole  
in the garden; or if the trouble is  
objection to, and a larger apparatus



45:

dissect. I should advise a closet  
 built nearly on the same principle  
 as a water closet - the tank filled  
 with dry earth, and the earth  
 content deposit made to pass down a  
 straight pipe, and received into a  
 box on wheels, which once a month  
 can be wheeled into the garden or  
 the field and dug into the soil.  
~~There~~ a fertilizer of the fresh class  
 in order of merit is procured, and  
 those who have once seen a crop of  
 strawberries grown with such a  
 fertilizing agent must be convinced  
 of the utility - In a plan so far  
 superior to the old water closet system  
 (if even only in this respect)  
 the towns the procuring of the earth  
 would not be so easy a matter as  
 in the country though I doubt not  
 in these days a joint stock company



46. of limited liability, - would be found  
who would gladly and efficiently  
supply the desideratum.

In one hot day after a week of such  
weather as we usually get in June  
and July one man could obtain  
and pulverize as much dry earth  
as would supply the domestic  
quantity for the use of 7 persons  
for a twelve month and the cost  
of the supply would be about  $3\frac{1}{6}$ .  
and the value of the manure  
about three pounds -

But we in England more slowly in  
sanitary reform, meanwhile intense  
fever and other presentable diseases  
sap the life blood of the population  
and commit their fearful danger  
unchecked -

Now propose to consider the symptoms  
which presenting themselves lead us

47.

To diagnose a fever which for  
the most part has received the  
name of

Typhoid or Enteric Fever

Dr. Paruchon describes it as

"An endemic communicable disease,  
generated by certain forms of decomposing  
animal matter" hence he termed the  
disease — Pythogenic Fever —

The Late Dr. Lanne as a

"Slightly infectious disease generated  
by putrefying animal matter"

Dr. Aitken who it may be remembered  
in his first edition stated his belief  
that Typhoid and Typhus were  
the same fever —

"A continued fever associated with  
an eruption on the skin appearing  
from the 8<sup>th</sup> to the 12<sup>th</sup> day and  
occurring in crops" etc.

48. Sir of Corrigan as  
An Acute Follicular Eruption  
with light red spots of eruption often  
in great number and becoming confluent  
there is perhaps no disease among the  
contaminated fevers which presents so many  
different symptoms and which has  
been described by so many observers  
so frequently. Dr. Murchison for example  
lays stress on the eruption being isolated  
and few in number the spots being  
the cause in typhus fever while  
we find Corrigan describing the  
eruption spots as so numerous as  
almost to become confluent  
For my part I have never seen a case  
of true enteric fever when the  
eruption was so marked or the  
spots so numerous as in the cases  
of Corrigan and in many cases  
there was no eruption to be seen at all

This eruption when present is of a deep rose colour occurring in small spots in crops on the chest and arms mostly disappearing on pressure fading away in a few days and succeeded by fresh crops which in their turn give place to others, and lasting from the 7<sup>th</sup> to the 12<sup>th</sup> days. When called in to a case of this.

Enteric Fever the earliest symptoms are those occurring in a severe influenza, great labile excitement, rigor, chilliness, cold perspiration on the forehead, nausea vomiting, and sometimes a profuse or it may be only a slight diarrhoea. This last symptom may be absent and marked constipation take its place.

About the 9<sup>th</sup> day of the fever attack is usually 3<sup>rd</sup> in which the patient has been confined to bed the

50. The febrile signs seem to approach  
their height. The pulse if it has not  
done so before now rises to from  
120 to 150 beats per minute. The respiratory  
movements are always quickened. Even  
When chest complications are not present  
St. Simon found them to be 20 in 50 cases  
30 in 38 cases — 40 in 22 cases —  
The hectic flush makes its appearance —  
the lips quiver the eye is fixed &  
there is a vacant stare, a pinched  
state of the features a peculiar expression  
("Mans Sardonius") once seen not easy  
to be forgotten a frightened look - dilated  
pupils great restlessness, and I have  
seen the most violent delirium come  
on each night lasting till morning when  
it subsided leaving the patient in so  
exhausted a state that he lies in a state  
of stupor all day from which he is  
aroused the following night by the returning

57. Delirium. I have noticed that this  
wandering of the mind takes on a  
manic form frequently so that the  
sufferer is the victim of fearful  
optical delusions which ~~deplete~~ the  
mind & exhaust the body.  
Bleeding from the nose is a constant  
symptom but not peculiar to the  
form of disease; a much more  
serious symptom denoting as it does a  
grave complication is that of Melæna  
often also there is blood in the urine  
and a dark serous fluid exudes from  
the gums and mouth - there is of course  
great thirst. the mouth is parched and  
dry the lips in a similar condition  
crack as also the tip of the tongue,  
the papillæ are enlarged and the  
tongue and back part of the fauces  
are covered with a thick creamy  
deposit; so much so that the Physicians

62. Finds its response to moisture the lips  
and tongue before the patient is able  
to answer a single question

Violent headache short paroxysmal Cough  
difficulty of breathing and if there is chest  
complication we frequently hear the wheezes  
on percussion absence of the vesicular  
murmur Bronchial breathing and  
many signs of rapid circulation of the  
lung - or there may be spasmodic contraction  
of the ramifications of the bronchial tubes  
causing "choking fits" of a most  
alarming nature

The heat of the body is increased far  
above the normal temperature and  
the skin is dry and not infrequently  
erythematous to a slight extent -

The temperature varies from 95° to 103°  
in the case of the servant girl I visited  
the thermometer marked 104° on  
the evening of the 3<sup>rd</sup> day in which



she was confined to bed. Scarthach  
often indeed in mostly all cases comes  
on about the 10 or 12<sup>th</sup> day of the  
attack there is marked tympanites  
& gurgling over the right iliac  
fossa.

To narrate the exact symptoms of  
each case in any given must be  
indeed a difficult task so varied  
are they in each case that in two  
are they all exactly alike so much  
depends on the form of the attack the  
age and constitution of the sufferer  
and the attention he receives as also  
numerous other causes.

But I have endeavored truthfully  
to draw the picture as I have myself  
seen it, and to refer only to  
the chief characteristic symptoms  
of the disease.

But in the midst of all this fearful



54. Combat of Nature with her insidious  
enemy a sudden bright ray of light  
often rushes in and frequently unexpectedly,  
We find a marked lessening of the  
temperature which however must not  
be below  $97^{\circ}$  and a copious  
eruption of sudamina all over the  
trunk, this the Physician knows  
best how to appreciate and welcomes  
these signs as the herald of a  
victory won.

The Morbid Anatomy  
Which teaches us what the poison is  
Capable of producing and what indeed  
in all cases it tends to produce. Much  
now for a short time engage my  
attention, and in doing so I am  
sorry to say I am unable to refer  
to any investigation of my own  
but must endeavor to epitomise  
some of the known literature of the subject.

Congestion of the Brain a tendency to  
 alteration of its Membrane and of  
 the Mucous Membrane of the Oesophagus  
 and stomach softening of the Spleen  
 with rapid enlargement owing to the  
 obstruction in the Portal Circulation  
 and Congestion of the Liver

Congestion of the Lungs often Consolidation  
 are among the most prominent pathological  
 appearances to be met with

But that which has engaged the  
 greatest attention of Pathologists of late is to  
 be found in the Mucous Coat of the  
 Intestines and especially in a number of  
 glands situated near the Ileal  
 Caecal Valve and known as  
 "Peyer's glands,"

In the Lancet of January 20<sup>th</sup> 1872  
 an excellent article on the  
 "General lesion of Typhoid fever its nature  
 and treatment" by Dr. Macleagan,

56. The first part of which I append  
it relating to the subject; it will  
be seen from it that the supposed  
cause of impaction of the glands is  
derived in Dr. Macleagan's opinion from a  
source within the gland and such as  
was supposed from without this  
may be the case but it would be a  
difficult matter to prove the exact  
way in which the poison enters the  
gland whether from the blood or from  
absorption of the poisonous element  
from the bowel when much certainly  
it does exist but this is of no practical  
importance in my opinion  
It would seem from abundant proof  
that at any rate there is a lesion of  
the small intestine in this disease and  
I should think it at least probable  
that the destroying agent brought to  
the bowel by the blood takes hold

57. in that tract of mucous membrane,  
and causing a specific inflammation  
tends if permitted to extend itself  
to the adjacent structures and the  
presence of these glands tends to  
increase the hold which the poison  
has effected on the bowel; the action of  
these glands are arrested and the  
now swollen gland takes on an unhealthy  
action and becomes the hot bed in which  
the poison can fully develop itself;  
an unhealthy eschar is formed on the  
surface and an internal (Bubo lth),  
abscess is formed the gland suppurates  
and in time the poison burrows its way  
to the posterior part of the gland and if  
unarrested in its progress soon perforates  
the outer coat of the intestine & sets  
up a fatal Peritonitis  
I wish not further enter on this subject  
I may refer to the labours of

58. Dr. Allen Thompson and other  
Pathologists who have investigated  
this matter; —  
and pass on to consider the  
treatment of the disease.

"The Cure of Leucæ" is a term to which  
I strongly object as I do not believe  
there is any such thing possible  
Leucæ such as I have been describing  
rush ~~run~~ their course and if we  
interfere and endeavor to arrest  
the progress of the disease suddenly  
by such active measures as have been  
proposed for "cutting short an attack"  
in many cases we will do such  
damage as we shall find difficult  
to repair.

The poison entered into the body does  
not set up such violent symptoms  
as apparently usher in the disease  
but it has taken good hold on

59. The system; therefore it must be  
gently and gradually eliminated while  
we treat fresh symptoms as they arise  
and baffle the effects of the poison  
by the administration of such remedies  
as we know to possess a soothing  
influence on the parts affected and  
thus render them more fitted to combat  
with the foreign substance, which  
would if permitted destroy and disorganize  
the functions necessary to the healthy  
discharge of their office.  
The fever may run a course in no  
way calculated to alarm for even  
three weeks; but the Physician  
never permits the knowledge of the nature  
of poisonous agent he has to deal  
with to leave his mind, he is  
ever anticipating evil; (which  
is the surest safeguard against  
it) he knows that although the

60. Usual Complications, — Bronchitis  
Pleurisy Subacute Laryngitis General  
Emphysema of the lung etc. may not  
be present. There ever lurks in the system  
during the continuation of the fever an  
unseen poison, which may be un-  
apparently destroying the life of this  
patient while all around seems  
hopeful.

It was then the knowledge of the  
action of the Bowel that first led  
me to consider what remedy I could  
procure to act in such a way as to  
soothe the inflamed and irritated surface  
of the bowel and accompanying glands.  
The idea struck me that though  
I could not alter the Lig. of the Aorta  
of Ammonia to procure an action on  
the skin Opium to procure sleep  
Hydrocyanic Acid to quiet; Chloral Hydrate  
to anesthetize, Astringents to express the



61. and the action of the bowels, I sought  
to compel an action from the  
kidneys. Pectorals I sought the chest;  
I had no remedy by which I could act  
constantly, and from the front on the  
inflamed surface of the intestine  
producing a soothing influence.  
Even when the symptoms were not  
sufficiently urgent to call for more  
active interference.

This consideration led me to try the  
effects of the internal administration  
of large and frequently repeated doses  
of opium knowing well the  
heating influence of that agent on  
an inflamed and cracked surface  
when applied externally.  
I prescribed ʒ drachm doses every two or  
three hours throughout the course of the  
disease and with the best possible  
results. I found it prevented the



62. excessive action of the bowel  
and knowing well the evil of permitting  
a quantity of fast decaying stools  
poisoned with the morbid agent  
to accumulate in the bowel and  
generate impregnated gases I took  
care to procure a gentle action of the  
bowel by the administration of  
Castor oil and opium every  
second day in which it had been  
confirmed.

I may now refer again to the case  
I have noted of the "Farm laborer"  
to whom I administered glycerine daily  
from the commencement of the attack;  
he had no excessive diarrhoea though  
twice a little blood was passed.

About the 14<sup>th</sup> day of the Fever  
as an experiment I omitted the  
glycerine and anxiously watched  
the result; in a few days persistent

63. and severe diarrhoea set in - an action from the bowels as often as 6 or 7 times per hour; the stools passed <sup>were</sup> most characteristic of the disease and it was not for a day or two that I was able to check the troublesome symptoms, which however when effected decided me at once on the propriety of again administering the glycerine daily as before and it was continued on for some weeks but the patient recovered presenting a return of such symptoms from this cause as well as from others I came to the conclusion that in glycerine we possessed an agent of great use when administered frequently & from the first as a preventative more than a curative agent and I would confidently recommend its use to those who have more

64. opportunities of testing its value  
than I now have. I always used  
"Pills Pure Glycerine"; the known  
impregnation of the more common &  
cheaper kinds rendering them unfit  
for internal administration.

There is also another point I consider  
of the greatest importance in the treatment  
of all fevers but especially in "Enter Fever".  
I would reiterate the words of the  
late S. James of Dublin "Feed Fevers"  
in opposition to the popular notion  
carried out indeed by many medical  
men of the present day "Feed a Cold  
Starve a Fever" —

Fever patients do not apparently require  
a large supply of nourishment during  
the time at which the fever is at  
its height, because it causes a debile  
excitement, a nervous energy and a  
false strength even of the pulse itself.

65- But soon & later the German with  
Outside and leave his victim in an  
exhausted state the vital effect of  
separation unable to properly carry out  
its work on a system previously  
exhausted & destroyed by a violent fever  
the patient who has bravely fought his  
way through the disease, will succumb  
to a more powerful influence brought  
to bear against him and often times  
he who might have been supported  
and whose strength should have as far  
as possible have been preserved for the  
crisis now sinks not a prey to the  
disease but of neglect in the  
administration at the proper time of  
suitable nourishment & stimulents  
I have known more than one instance  
in which the medical attendant  
discovered this truth unfortunately too  
late to avert the fatal consequence.

66 Dr Stokes of Dublin has given us a very  
valuable sign by which to know when  
the free administration of Stimulents is demanded  
viz - When the first sound of the heart becomes  
diminished - then can be no doubt that  
then the failing strength of the patient urgently  
calls for the free use of Stimulents; but  
I would say do not wait for this  
commence from the first with gentle  
stimulation and good nourishment strong  
Beef & Chicken tea Little cups wine  
Brandy & Ammonia Camphor etc.  
I have my exact dose of these remedies  
I have them as follows in support of which  
statement I may say the dose of Brandy  
per day for a fever patient is from  
one oz to 30 oz - Professor Coman  
of Glasgow himself cites a case in which  
he administered to a boy suffering from  
Enteric fever and only 15 years of age  
& bottles of Brandy in as many days

67 and to this in a great extent he attributes  
the recovery of the patient; and I have often  
remarked that Alcohol in fever does not  
produce the same symptoms as in health  
much larger doses occasioning no head  
symptoms -

Lastly I have always impressed on the  
minds of the friends of the patient the  
necessity of having a large tub of cold  
water outside the patients door containing  
some disinfectant - such as 'Condy's fluid'  
into which all the clothes etc. coming  
from the infected person are submerged  
immediately. - In conclusion, I have particularly  
avoided mentioning the modes and ways  
and the doses of the remedies (we comply  
in a case of Entere fever as each does  
not fall within the limit of the  
task I have allotted to myself, - and  
the shortness of the time (2 days) I have been  
able to give to the preparation of this

of this thesis much from the excuse  
for the many omissions of facts of  
great importance as bearing on my subject.  
I have been compelled to make

Perceval Hunt

March 22<sup>nd</sup> 1872 -